

Narcondam Island and notes on some birds from the Andaman Islands

BY

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(With a plate and a text-figure)

While working on the birds of the Andaman and Nicobar Islands, both in the field and indoors, I often thought of the Narcondam Hornbill (*Rhyticeros narcondami*) discovered and described by Hume (1875 *Stray Feathers* 1: 411) in the following words:—

“As we neared the island of Narcondam, which is a single large hill, some 1,700 feet in height, densely wooded, and standing up solitary in the sea, between the Andamans and the Coast of Burmah, we noticed a number of black looking birds with white tails, flying about from tree to tree; every one at first pronounced them to be *Calaenas nicobarica*, of which we had, a few days previously, at Battye Malve seen such vast numbers. As we, however, neared the shore, it became apparent that both the necks and tails of these unknown birds were too long, and the former too clumsy to belong to the Nicobar pigeon. The island is a very difficult one to land on; everywhere rock-bound, and its foundation running sheer down into deep water, so that a few yards from the water's edge the sea is many fathoms deep. When at last we landed, the whole interior, if I may so call it, of the island, i.e. from beach to summit, was found to be absolutely impenetrable; cyclone after cyclone had prostrated generation after generation of trees, amidst the debris of which, a new, and densely packed generation had sprung up, interlaced with canes and other thorny creepers, and it was with great difficulty that we succeeded in bagging a pair of this strange bird, which turned out to be a small hornbill exactly like *ruficollis*. One or two more were shot, but the jungle was too dense to permit their being retrieved.”

Narcondam Island is in the Bay of Bengal about 80 miles off the Andamans towards Burma. It is part of the same submerged line of hills which includes the Andaman and Nicobar Islands. It is less than 5 square miles in extent, heavily forested, and contains the hill already referred to by Hume. Wadia in *GEOLOGY OF INDIA* (1966) refers to it as “a craterless volcano composed wholly of andesitic lavas. From the amount of denudation that the cone has undergone it appears to be an old extinct volcano.”*

In the Andamans and Nicobars themselves, several species of birds differ from those on the adjoining mainland and have again broken up into two or more subspecies, and it appeared probable that the circumstances that evolved so distinctive a bird as a hornbill would also have affected smaller forms.

Until 1968, the island was uninhabited, and though I flew over it on one of my trips to the Andamans the only means of visiting it was a chartered boat, the cost of which (at least to me) was prohibitive. Some

* The name Narcondam, derive from *naraka*=hell and *kundam*=pit, suggests that it was an active volcano within human memory.

time that year, noticing that our Prime Minister had visited the Andamans, I sent her reprints of my paper, and the very kind reply I received prompted me to ask her to help me make the visit. I was referred to the Ministry of Education and in the course of correspondence was informed that the island was now occupied by a police picket and that I could go out on the launch which called there every 3 or 4 weeks and come back on the next trip.

Apart from the difficulty of leaving town for so long, the absence of any details regarding the nature of the island, the conditions there, and the possibility of not being well occupied for 3 or 4 weeks made me hesitate, but after some negotiations it was decided that my party would be taken out on one trip, have at least two days on the island, and then decide if we should stay longer or not. Accordingly Robert B. Grubb (who had visited the Andamans with me earlier) and Rex Pimento, both of the Bombay Natural History Society, reached Port Blair by boat on 3rd March 1969, while I flew in later on the same day via Calcutta and Rangoon intending to leave for Narcondam by a boat scheduled to leave the following evening. In the evening we drove out far towards Wimberleyganj and saw some birds, both migrant and resident, with most of which we were now fairly familiar—introductions like Mynas (*Acridotheres tristis*) and House Sparrows (*Passer domesticus*), migrants e.g. Osprey (*Pandion haliaetus*) and Marsh Harrier (*Circus aeruginosus*), Golden Plover (*Pluvialis dominicus*), Common and Spotted Sandpipers (*Tringa hypoleucos* and *T. glareola*), Redshank (*T. totanus*), Common Swallow (*Hirundo rustica*), and resident Imperial Pigeon (*Ducula badia*), Greyfronted Green Pigeon (*Treron pompadora*), Greyrumped (*Collocalia fuciphaga*) and Whitebreasted Swiftlets (*C. esculenta*), and many others. The following morning (4th) we drove to Chiria Tapoo in an attempt to visit the cave which gives this place its name, where the White-breasted Swiftlets nest and which I had visited on an earlier trip. We could not secure a local guide and though we did some hard walking we failed to find the cave. We saw in knee-deep tidal water a party of about 5 chital, an introduced species reportedly now numerous but seen by me in the Andamans for the first time. What were they there for, to drink water or eat crabs or both (see K. K. Tiwari, *JBNHS* 60: 725)? Chital skins are available in the bazar at Port Blair and I understood that 15/20 come in every month. I was also told of some wonderful (!) night-shooting when many were shot from a boat with searchlights.

We were informed that the boat would be a day late, but were not particularly concerned and accepted a local shikari's offer to take us out duck-shooting. On the 5th we were taken to a long, drying jheel

which held a few moorhen on a patch of clear water, but they soon scuttled into grass. A shot at an impossibly high *Accipiter* sp. put up a flock of Lesser Whistling Teal (*Dendrocygna javanica*) which I had not seen on the Andamans, and we saw a pair of Purple Moorhen (*Porphyrio porphyrio*) which had not been recorded here before. There were quite a few snipe, and four shot and examined were all Pintail (*Capella stenura*). Eight Whistling Teal also were collected.

A specimen of the Striped Squirrel (*Funambulus pennanti* Wroughton) which appears to have established itself here fairly recently (see Y. Chaturvedi, *JBNHS* 62: 545) was obtained. We returned to the dak-bungalow hoping to leave for fresher fields on the morrow.

I visited the (boat) *Yamuna* in the morning (6th March) to ascertain when we were scheduled to leave and was perturbed to learn that the crew had not been paid their salaries and the boat would be further delayed till the night or the following morning. In the afternoon news trickled in that there would be a further delay of two or three days, for the boat was being diverted northwards to Landfall Island to greet the canoe *Angre* in which two young men had rowed down from Calcutta. My patience was exhausted and, with the assistance of the Chief Commissioner, I booked my passage back to Calcutta for the morrow (7th) leaving the others behind to try and tag on to a party of the Survey of India which was leaving for some of the southern islands (Cinque, South Sentinel, etc.) in two or three days, and with the hope that they would be able to reach Narcondam some time later.

Grubh who, with Pimento, did most of the collecting reports as follows:

On the 7th morning we went to Sipighat for the Purple Moorhen and obtained one within a short time. Arrangements were then completed with the Survey of India party to visit different islands including Battye Malve and Narcondam in the chartered vessel the *Yamuna* scheduled to leave on the 11th.

South and North Cinque 11-12 March

We reached South Cinque on the 11th evening, but there was not enough time for any satisfactory study or collecting. North and South Cinque are within 2 furlongs of each other and consist of low hills covered with forests of Padauk (*Pterocarpus indicus*). Fresh water is available only on South Cinque. Introduced spotted deer are found on both these islands, those on North Cinque being reportedly emaciated because of the non-availability of fresh water to drink. Orange-headed Ground Thrush (*Zoothera c. andamanensis*) were often met with on South Cinque and were tame and confiding. Once a flock of five was seen feeding on the ground. Pimento saw two Barn Owls (*Tyto alba*) on North Cinque. Both these islets are uninhabited.

South Sentinel 12-18 March

The Survey party had five days' work here which enabled us to cover the island satisfactorily. South Sentinel is a flat coral island of about 5 miles circumference with a distinct continuous lagoon along half the shore, the rest being rocky and sandy beach.

Although there is dense vegetation, the island looks very recent and is undisintegrated madreporian coral wherever the ground is exposed. Along nearly half the circumference of the island, and on the same side as the lagoon, there is a depression within a few yards of the sea-shore. This is filled with saline water, apparently replenished during the monthly tides.

The entire island is belted along the shore by *Pandanus* sp. interspersed with patches of mangroves enclosing a dense jungle of the Andaman Bulletwood [*Manilkara littoralis* (Kurz)], distinguished by a thick canopy of horizontal branches sprouting from a height of 60 to 80 ft., shutting out even the midday sun and making it gloomy inside the forest. Fresh water is not available on the island and there were no human habitations.

Mammal species are few in number. Rats came to the kitchen tents at night to feed on the refuse. They were also seen running around on the forest floor at night near the shore and when disturbed climbed low branches. Flying Foxes (*Pteropus* sp.) were seen flying at dusk and feeding on the trees at night. Two dolphins were seen near the shore on the day of our arrival.

Among the birds, the Pied Imperial Pigeon (*Ducula bicolor*) was the commonest and appeared to be feeding mostly on the fruits of the Bulletwood and nesting on the lower branches and on young trees. Its call was heard throughout the island. The flight was amazingly noiseless except while taking off, when the wings clapped loudly over the back, and a buzzing noise while taking sharp turns.

The Koel (*Eudynamis scolopacea*) was seen and heard infrequently. The White-collared Kingfisher (*Halcyon chloris*) was noticed inside the forest as well as out on the coral reef, calling or sitting silently. Only a few Hill Mynas (*Gracula religiosa*) were seen and heard. White-eyes (*Zosterops palpebrosa*) occurred in flocks on mangroves along with Sunbirds (*Nectarinia jugularis*). Three Junco Crows (*Corvus macrorhynchos*) were seen and heard on two different days. Nicobar Pigeon (*Calaenas nicobarica*) was seen in the jungle, solitary, on the ground. An adult and an immature were collected and their stomachs held hard seeds of Sapotacea and another unidentified variety. A few Thickheads (*Pachycephala cinerea*) and three Whiteheaded Mynas (*Sturnus erythropygius*) were noticed in an area with thick undergrowth.

The sea-snake *Laticauda colubrina* was common on the shore, often coming into the tents at night and causing panic among the men. Several Green Turtles (*Chelonia mydas*) were seen in the lagoon. One of them was shot and was found to have mature eggs. They were quite fearless and could be approached very close. From the trails on different parts of the beach it was evident that many had come ashore to lay.

The only terrestrial reptile, the Water Monitor (*Varanus salvator*), was common all over the island. Land crabs found in enormous numbers on the island were possibly their main food, although a dozen were seen feeding together on a dead turtle on the shore and many came to the camp to scavenge. Quite a few were of large size, one specimen being seven feet long. The other two we collected measured 5 ft. 7 inches and 6 ft. 3 inches (tail broken at the tip) respectively. They were impressive to look at and resembled the Komodo Dragon (*Varanus komodoensis*) of Indonesia.

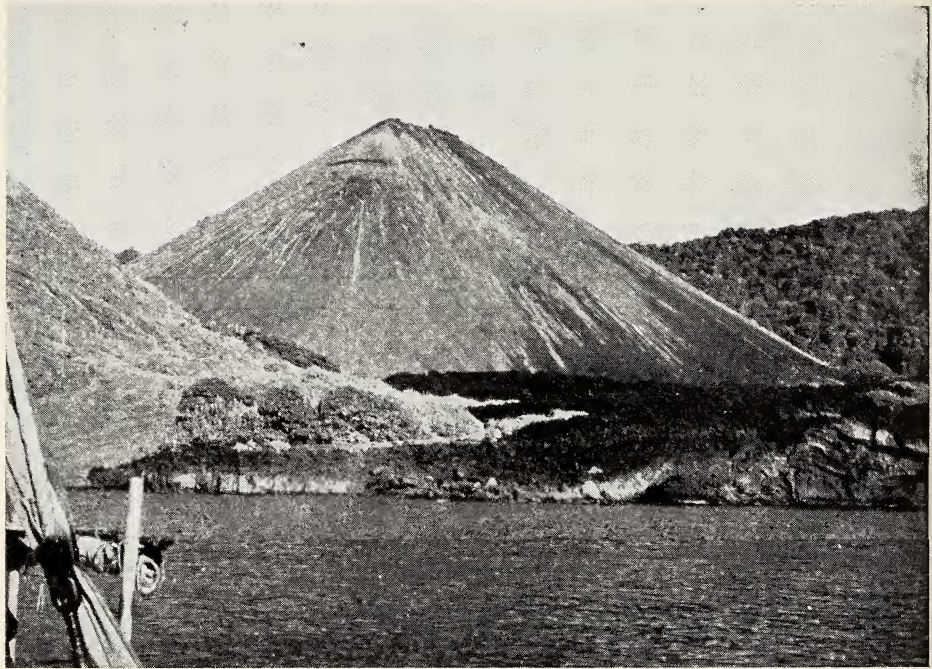
Robber Crabs (*Birgus* sp.) were often seen inside the forest under fallen trees as well as crawling about. The grip of their chela pincers was powerful enough to make a deep dent on the butt of my gun. A Robber Crab was observed to be feeding on a big freshly killed land crab.

Battye Malve 24-25 March

Battye Malve is a small, flat, uninhabited coral island 19 miles north of Car Nicobar. It has no fresh water and no shore, the coral reef table rising abruptly about 25 feet above sea-level.

Landing at Battye Malve was difficult. The steep rocks made it inaccessible except at one place where there was a jutting rock at a lower level. The skilful Nicobarese boatmen with their *odi* took us to this landing rock at the right moment between waves, and one or two, sometimes more, people could get on to the rock before the

Abdulali : Narcondam Island



Above: Barren Island with volcano. (Photo: Comd. I. S. Bhati, I.N.)

Below: Landing Bay at Narcondam Island. (Photo: B. R. Grubh)

boat fled the next oncoming wave. The danger lay in the huge cavities on the rocks at water level, into which the boat could get sucked in and smashed by the swelling waves. I was on the island for only two hours, an hour in the afternoon and another the next morning.

The immediate land next to the sea is bare, sharp, calcareous rock, impossible to walk on barefoot. This is followed by a thin belt of shrubbery and then comes the bulk of the jungle which is formed of the Andaman Bulletwood trees (*Manilkara littoralis*) seen on South Sentinel. However, there was heavy undergrowth among trees and the trees were covered with creepers. There were some coconut trees planted years ago by the Nicobarese, but they were uniformly emaciated and had no fruit. The agamid lizard (*Goniocephalus subcristatus*) was common, running on the ground and climbing among the vegetation. A skink (*Mabuya tytleri*) also was seen on the ground among litter. No other reptiles or frogs were seen during our short visit.

There was not enough time to look carefully at the birds at Battye Malve. At South Sentinel the Pied Imperial Pigeon was abundant while the Nicobar Pigeon was uncommon. At Battye Malve the Nicobar Pigeon was abundant, even more so than the Pied Pigeon on South Sentinel. Almost every tree had five or six of them sitting alone or sitting on the nest. The nests held a single naked nestling each. No eggs were found. Many young birds flew around and could be easily distinguished from the adults by their green tails (not white) and weak flight. The birds were tame and I could have shot dozens of them in an hour if I had so desired. This island, probably the main nesting place of this magnificent pigeon, was being used by the Navy as a target for shelling. A representation made during one of the recent ornithological trips to the Andamans has resulted in this practice being discontinued.

A pig was seen by a member of the Survey party. The pigs are reported to get water from certain plants on which they feed.

Narcondam Island 23rd April

We had considerable difficulty in obtaining transport for Narcondam Island and a day's visit was possible for me only through the kindness of Capt. V. A. Dhareshwar of the Indian Navy. The naval boat reached the island on the morning of the 23rd April. I met the police head constable who had been advised of my arrival by the Superintendent of Police at Port Blair. As the boat had to start back in the evening I hurriedly collected for half the available time, and spent the rest skinning the birds *on the island*. I did not want the specimens to spoil as had happened at Battye Malve, when I tried to do the skinning on board on a rough sea and was forced to leave the work half-done due to nausea.

Osmaston (*JBNHS* 16: 620-622) gives a good description of Narcondam Island. Although the surrounding sea is reported to be deep, ships anchor at a safe distance to avoid submerged cliffs. The eastern side of the island slopes gradually into the sea and has a rocky beach of pebbles and boulders. The police outpost is situated on this side. A water tank has been built to store the water brought from Port Blair. However, the police party have tapped a perennial freshwater stream and have conveyed the flow through hollow tree trunks.

I could spend only 8 hours on the island. With two police constables to guide me, I covered a stretch of low rolling hills extending south to north. The Narcondam Hornbill (*Rhyticeros narcondami*) was tame and common. Their call *ka-ka-ka-ka* could be heard very often in all parts of the area covered. They gave easy shots and the report of .12 bore gun did not drive them far. Their stomachs held fruits of *Ficus* sp. and four types of seeds. The police force staying at Narcondam apparently used to eat these birds till recently when the Chief Commissioner of the Andamans and Nicobars declared it a protected species.

A Hill Myna (*Gracula religiosa*) and a Green Imperial Pigeon (*Ducula aenea*) were seen as also a Dark Thrush (*Turdus obscurus*). The other birds seen include a Large Indian Parakeet (*Psittacula eupatria*) and Yellowbreasted Sunbird (*Nectarinia jugularis*). The Koel was seen and heard, and a flight of yellowish wagtails (*Motacilla* sp.) was observed. A Reef Heron (*Egretta sacra*) in dark phase and a *Numenius* sp. were noticed on the shore.

Among the reptiles, the juveniles of the Water Monitor were seen near the police settlement. Two kinds of skinks (*Mabuya tyleri* and *Lygosoma* sp.) were often seen in the forest among dry leaves. A few rats noted in the forest were the only mammals I saw.

I returned to Port Blair on 24th morning and spent the day completing the skinning, and left for Bombay the next day.

ROBERT B. GRUBH

Upon my return to Bombay, I wrote to the Prime Minister telling her the whole story. A reply came soon, where with an expression of regret, she asked me to try again. Grubh and Pimento returned at the end of April with 146 birds of 78 species. In addition, they had obtained 21 lizards, 6 snakes, and various miscellanea like bats, rats, etc.

A preliminary examination of the collections revealed a pair of Crested Bazas (*Aviceda leuphotes*) which, in addition to adding a new species to the Andaman avifauna, were strikingly different from Indian birds (*JBNHS* 67: 137). If the Andamans still hold undiscovered such large and distinctive birds, what may Narcondam not produce?

With the last letter from the Prime Minister, I thought that another effort would be worthwhile and, after the usual negotiations, I arrived at Port Blair via Calcutta and Rangoon on 27th April 1970 and was met by Grubh and my son Akbar (15), who travelling by train to Madras had arrived by boat a day earlier. An immediate check-up with the Chief Commissioner revealed that all was well and that we would leave by the police launch the following night to stay at Narcondam for 2 days. In the middle of our lunch, we were hurriedly summoned by the Chief Commissioner to be informed that, due to various circumstances, the boat was needed back on the morning of 1st May, giving me less than a day on Narcondam! After much argument, an arrangement was arrived at whereby I was to be dropped at Narcondam, and then be picked up by another boat after 4 days. This sounded much better than the original two days and we decided to visit Wimberleygunj in an effort to see if any more Bazas could be located. While this was not seen, we met several old residents like the Emerald Dove (*Chalcophaps indica*), Andaman Swallow Shrike (*Artamus leucorhyncha*), Moorhen (with red on forehead) (*Gallinula chloropus*), Racket-tailed Drongo (*Dicrurus paradiseus*), Chestnut-headed Bee-eater (*Merops leschenaulti*), Green Imperial Pigeon (*Ducula aenea*), Red Turtle Dove (*Streptopelia tranquebarica*) in scattered parties of 15/20 in the fields, Crow Pheasant (*Centropus andamanensis*), Fairy Bluebird (*Irena puella*), Jungle Crow (*Corvus macrorhynchos*), introduced Common Myna (*Acridotheres tristis*) and House Sparrow (*Passer domesticus*), and migrants like

Whimbrel (*Numenius phaeopus*), Spotted Sandpiper (*Tringa glareola*), and Swallow (*Hirundo rustica*).

The M.V. "Jawahar" left at 10 p.m. and I had the uncomfortable privilege of occupying the single cabin, while the others slept comfortably on deck! Early the following morning (29th April) we obtained, in mid-ocean, a Migratory Nightjar (*Caprimulgus indicus jotaka* Temm. & Schl.) an addition to the Indian avifauna, which I have already reported (*JBNHS* 67: 331).

As we anchored off Narcondam, a boat drew alongside and the Captain was handed over a wireless message received at the police outpost. He immediately showed it to me. It required him to be back at Port Blair on 1st May "with Abdulali repeat with Abdulali." Under the circumstances, there was no alternative but to reshuffle our plans, and after some consultation we decided to stay at Narcondam till about 9 the following morning and then leave for Barren Island which we expected to reach by about 2 p.m.

Immediately after landing (at about 3 p.m.) I walked up along one forest path with Akbar while Grubh went out in the other direction.

Narcondam Hornbills were apparently the commonest or at least the most noticeable birds. In addition to a collection on a peepul (*Ficus* sp.), the loud raucous call was heard in all directions. The Alexandrine Parakeet (*Psittacula eupatria*) was in pairs and their loud *kree-a kree-a* and nasal *tay-ain* were frequently heard. The small sunbird (*N. andamanica*) which Osmaston said was the commonest bird on the island and frequented the coast was only once seen.

It soon began to get dark and we returned to the camp and walked around in the forest near by. Beyond the camp we saw a small dark hawk (*Accipiter* sp.) chasing a Blackheaded Kingfisher (*Halcyon pileata*) and, in trying to make up my mind as to which to shoot, I missed both. The kingfisher was picked up wounded the following morning and must have been hurt by the hawk, which the police said had even attacked a dog.

A Flying Fox (*Pteropus satyrus*) was shot off a *Caryota mitis* palm, and a little later numbers were seen flighting to 2 or 3 large trees near the camp and some specimens obtained. Large rats [*Rattus flexibilis* (Miller)] were seen on the forest floor and on tree trunks both in daylight and at night.

During the night, we collected a few skinks *Lygosoma maculatum* and *Mabuya tyleri* and took possession of 2 snakes (*Laticauda laticauda*

and *Chrysopelea paradisi*) collected by the police after Grubh's visit last year and preserved in a jar left behind by him. All these reptiles have been previously recorded from Narcondam in Smith's FAUNA.

The following morning, the first calls were put down to a Koel, but later included almost certainly variations of the Hornbill's *kok-kok-kok kokkok* followed by a cackle not unlike that of a frightened domestic fowl. They were feeding on the berries of a large peepul-like *Ficus* and a male was watched as it flew over quarter of a mile to visit a small hole at the base of a branch high up in a Tipok (*Tetrameles nudiflora*). Here he produced berry after berry and fed the female (?) for 6 minutes in which at least 20 insertions were made. The edges of the hole were stained brownish all around on the whitish bark. No attempt had been made at concealment of the nest which as far as could be judged from about 150 yards appeared to be not more than 3" in diameter. Though several were seen in pairs, the 2 birds glassed thereafter were both males as also the specimen obtained. Their voices were heard all the time, with that of the parakeet a close second. Several Hornbills were mobbing a Sea Eagle perched in a tree—the latter was whitish below but with a grey head and throat.

We flushed a Pond Heron in dry forest which appeared to be a strange place in which to find this bird. This was later identified as *Ardeola bacchus*. A large swallow/crag martin with whitish under-parts and a longish forked tail soared high over the island, as also a large black swift. Grubh obtained another specimen of *Turdus obscurus* as on the last trip.

With much reluctance we left for Barren Island hoping to get a little more time there. However a foreign cargo boat was seen in the distance and we lost a couple of hours chasing it to no apparent purpose. With this waste of time, we reached Barren Island at 5 p.m. where a cone of ash rose in a ring of hills. Wadia (loc. cit. at pp. 38-39 and 415, describes it as follows:—

“Dormant volcano in Bay of Bengal to east of Andaman Islands 12° 15' N. lat., 93° 54' E. long., truncated remnant of a much larger cone. It consists of an outer amphitheatre about 2 miles in diameter, breached at one or two places, the remains of the old cone, surrounding an inner, much smaller, but symmetrical cone, composed of regularly bedded lava-sheets of comparatively recent eruption. At the summit of this newer cone is a crater about 1,000 feet above the level of the sea. But the part of the volcano seen above the waters is quite an insignificant part of its whole volume. The base of the cone lies some thousands of feet below the surface of the sea.

“The last time it was observed to be in eruption was early in the nineteenth century; since then it has been dormant. . . . Capt. Blair described an eruption in 1795. . . . another observer in 1803. Holiday J. R. and Mallet F. R. of Geological Survey of India have given a complete account in Memoir, Vol. XXI, pt. 4, 1855.

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“One of the few traces of geological and geographical changes visible in India since the advent of man.”

M. S. Krishnan in GEOLOGY OF INDIA AND BURMA (1968) at page 43 says :

“Central symmetrical cone 305 m. high with sides sloping at about 35° surrounded by eroded remnants of a second large cone 180-300 m. The crater elliptic and 90 metres in diameter some 13 to 15 m. deep in which are hot springs and fumaroles which deposit sulphur and some salts. Vegetation confined to outer slopes of the outer cone.”

The lava in rough-shaped blocks formed a gap through the outer ring, and hopping from stone to stone we climbed to the top of a ridge of ash between the inner and outer cones. While approaching the island, we had seen a few goats in the vegetation on the hillside of the outer ring. They were of various colours: white, black, and piebald. It will be remembered that they had been released there in 1891 to provide food to shipwrecked sailors. They had apparently done well and established themselves on the island. Abbott in 1901 thought there were several hundred. We did not see any after landing. Incidentally, Tytler quoted by Hume (1869, ROUGH NOTES, page 260), also refers to pigs, goats, and fowls being released on Narcondam for the same purpose.

As at Narcondam, we saw large rats [here *Rattus atridosum* (Miller)] both by daylight and after dark moving about on the hillside in open country. The low country is covered with a small bushy fig about 10' high and now in fruit. Large fruit bats appeared after dusk and after much firing by both Akbar and myself we picked up five, 3 black females and 2 brown males, a sexual dimorphism not common among bats. Osmaston's reference to two species of fruit bats at Narcondam possibly refers to this. The bats collected on this trip have been reported upon by Mr. J. E. Hill of the British Museum (Natural History) (*JBNHS* 68: 1).

It was dark by the time we got back to the shore and we had again reluctantly to pack up and sail to Port Blair. We were fortunate enough to get air passages to India on the morning of the 1st and got back to Bombay via Rangoon and Calcutta the next day. Thus ended another attempt at studying the birds of these far-away islands.

At the 10th General Assembly and 11th Technical Meeting of the International Union for the Conservation of Nature and Natural Resources held at New Delhi in November 1969, a resolution (No. 28) was adopted regarding the great value of oceanic islands, for an up-to-date and worldwide appraisal of conditions on all such islands and that a suitable provisional list be submitted to the Governments of Australia, Ecuador, France, Japan, New Zealand, the United Kingdom, and the United States of America for the purpose of reserving from exploitation or disturbance and making available for long-term research by scientists

of all nations certain oceanic islands under their jurisdiction which are not inhabited or in current use for other purposes. I had suggested that the Narcondam and Barren Islands and Battye Malve be so preserved and that the matter be discussed at the 8th Meeting of the Indian Board for Wild Life held in New Delhi on 24th and 25th October 1970. The matter was however not placed on the agenda and there has been some further correspondence in this respect. I do hope that it will be possible to preserve these wonderful islands, not only for immediate research but also for future generations to see what some parts of the world looked like not so long ago.

43 *Ardeola bacchus* (Bonaparte) (Malay Peninsula) Chinese Pond Heron

1 ♂ Sipighat, South Andamans, 1 ♀ Narcondam Island.

	Wing	Bill	Tarsus	Tail
♂ and ♀	220, 225	62, 61	57, 58	82, 83
(♂ ♀)	195-238	61-69	60-64	72-90) ¹

The first bird was obtained in a field among cattle and cattle egrets. The second at Narcondam was flushed off the ground in heavy forest, a most unexpected place for a pond heron. It was noted as *A. grayii* and, had it not a few black feathers on the middle of the back, I would have left it as *grayii*. Both birds have larger wings than the *grayii* available in the Bombay collection

20 ♂♂ 195-218 av. 209 10 ♀♀ 182-203 av. 193

Sp. No. 21885, a ♀ obtained at Wimberleyganj, South Andamans, and recorded as *grayii*, measuring wing 194, bill 59, tarsus 55, and tail 68, was re-examined and appears to have been correctly identified.

44 *Bubulcus ibis coromandus* (Boddaert) (Coromandel) Cattle Egret

♀ Sipighat, South Andamans, 2 April 1969.

Wing 243; bill from feathers 60 (50-66); tarsus 83 (82-92); tail 85 (83-96).

There are some unfortunate errors in the table of measurements in my Andaman paper (*JBNHS* 61, p. 502) which, together with the present specimen, should read:

	Bill (from feathers)	Tarsus	Tail
Andamans	60, 60 (50-66)	85, 90 (82-92)	85, 85 (83-96)

A single male from Prome District, Burma, has its bill 68 mm. but the 20 males and females from India are appreciably within the limits indicated in FAUNA (6: 350) and IND. HANDBOOK (1: 68) i.e. 50-66 mm.

11 ♂♂ 54-61 av. 58

9 ♀♀ 53-60 av. 57.3

¹ The measurements in parentheses throughout this paper are from either Stuart Baker's FAUNA or the INDIAN HANDBOOK.

On 3 March 1969, several with slightly rufous heads were seen near Port Blair, while on 28 April 1970 some were in breeding plumage.

46 *Egretta alba modesta* (J. E. Gray) (India) Eastern Large Egret

1 ♂ Port Blair, South Andamans.

Wing 365 (IH 355-375); bill from feathers 107; tarsus 155 (146-165).

47 *Egretta intermedia intermedia* (Wagler) (Java) Smaller Egret

2 ♂♂ Sipighat, 2 ♀♀ Chauldhari, South Andamans.

	Wing	Bill	Tarsus	Tail
2 ♂♂	315, 320	77, 79	116, 117	120, 124
2 ♀♀	280, 302	63, 73	91, 99	117, 122

In my note on Indian Egrets (*JBNHS* 62: 554), I had drawn attention to the uncertainty of the earlier records of this species from the Andamans and Nicobars. The present specimens show disintegrated plumes on the breast. The wings and tarsi, though larger than in the Indian specimens measured by me (*loc. cit.*), are distinctly smaller than in *E. alba modesta*.

These specimens re-establish the earlier records from the Andamans.

49 *Egretta garzetta garzetta* (Linnaeus) (Northeast Italy) Little Egret

1 ♀ Port Blair, Andamans, 3 April 1969.

In my earlier papers, I had withheld the subspecific identity of the Little Egret in the Andamans and Nicobars, for there was some doubt regarding the colour of their feet. In the present specimen the feet were noted as yellow when collected, but were dark and almost concolorous with the tarsus when examined in Bombay after about a month. Though different museum specimens show differences in the extent of yellow in the feet, there would now be no doubt regarding the identity of the Andaman birds.

51 *Egretta sacra* (Gmelin) (Tahiti) Eastern Reef Heron

1 Car Nicobar. White ♂.

Osmaston saw it on Narcondam.

The 8 birds of this species (6 ♂♂ 2 ♀♀) now in our collection include 3 white birds, all of which are males. Excepting one white bird (No. 22557) with traces of grey on the neck and upper parts, from Car Nicobar obtained on 4 April 1966, all have plumes on the back. They do not agree with Graham Pizzey's statement (1966) in *ANIMALS AND BIRDS IN AUSTRALIA*, page 160, that white birds have yellow bills and slate-grey ones dark bills.

57 *Ixobrychus sinensis* (Gmelin) (China) Yellow Bittern

2 ♂♂ South Andamans.

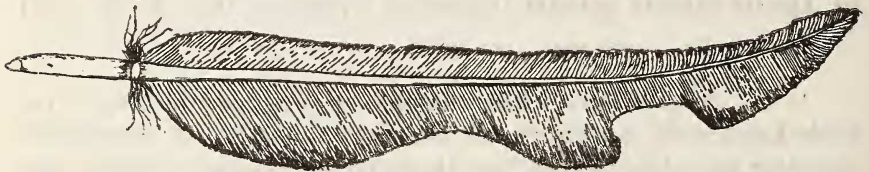
In the Nicobar report (*JBNHS* 64: 154) I had drawn attention to the absence of birds in adult plumage among the eleven examined from the Andamans and Nicobars. The two fresh ones are also in immature or sub-adult plumage.

88 *Dendrocygna javanica* (Horsfield) (Java) Lesser Whistling Teal

5 ♂♂ 2 ♀♀ South Andamans.

In the general account, I have referred to eight birds being killed in a few moments. One of them has been mounted for the Port Blair Museum. The remaining seven appeared to have consistently pale underparts with almost no chestnut, resembling the few skins in immature plumage available from India. Fortunately, the mounted specimen was available and was found to be as dark as the adults in India! The females are slightly smaller than the males.

While examining these specimens, I was surprised to notice the curious shape of the first primary:



Delacour (1954) *THE WATERFOWL OF THE WORLD*, 1: 27, refers to the primaries in *Dendrocygna* being variously notched or emarginate, but I have not seen any reference to this in Indian literature.

128a *Aviceda leuphotes andamanica* Abdulali & Grubh (Wrightmyo, South Andamans) Andaman Crested Baza

1 ♂ 1 ♀ Wrightmyo, South Andamans. Type and paratype, wings 224, 220; tails 130, 127.

This race was described in *JBNHS* 67: 136 from these birds collected on the first trip.

152 *Accipiter virgatus gularis* (Temminck & Schlegel) (Japan) Eastern Sparrow-Hawk

1 ♀ Wrightmyo, South Andamans. Wing 184, tail 130.

173 *Haliaeetus leucogaster* (Gmelin) (St. Prince's Island, Indonesia) Whitebellied Sea Eagle

On Narcondam we saw one being mobbed by several hornbills. Hume (1869) in *ROUGH NOTES*, page 260, quotes at length from Tytler's notes (unpublished?): "At Port Blair, it is often called the Duck Eagle from the quacking sound it emits . . . particularly when fighting with another of the same species, about some captured fish." They are said to feed largely on pipe-fish which are caught as they skim the surface. He also adds that they were seen in "great numbers" both at Barren Island and on Narcondam, feeding on Barren Island on the dead and decaying fish almost always strewn on the shores, "a perfect paradise" for sea-eagles.

190 *Circus macrourus* (S. G. Gmelin) (Voronezh, Southern Russia)
Pale Harrier

I had referred (*JBNHS* 61: 508) to the absence of any specimen of this species from the Andamans. Zoological Survey of India Sp. No. 23939, Wimberleyganj, South Andamans, a female [collected on 6 February 1930 (outer webs of 2nd, 3rd, and 4th primaries notched, tarsus *c.* 70, wing 332) indicates that this species does visit the Andamans.

200. *Spilornis elgini* (Blyth) (South Andaman Island) Dark Andaman
Serpent Eagle

1 ♂ Goracharma, South Andamans. Wing 354.

Blyth's description (1863), in *Journal, Asiatic Society of Bengal*, 32: 87 is generally accepted as the first publication. This is dated February 1863, while in *Ibis*, January 1863, p. 118 appears a letter from Blyth in which the name and description are given. In the absence of any evidence regarding delay in the publication of this number, this source would have priority.

200a *Spilornis cheela davisoni* Hume (South Andamans) Pale Andaman
Serpent Eagle

1 ♀ Sipighat, South Andamans. Wing 397.

The two additional specimens support my earlier opinion (*JBNHS* 61: 509 and 64: 155) that *elgini* and *davisoni* are two different birds. It is also worth noting that *davisoni* was shot over a tidal creek and contained crabs, while *elgini* was carrying a parakeet in a forested area, confirming the ecological differences mentioned earlier. The parakeet's brain had been completely devoured.

I had overlooked Hume's statement (*STRAY FEATHERS* 2: 84) that he saw this bird at Kondal, between Little and Great Nicobar.

211 *Falco peregrinus peregrinator* Sundevall Shahin

In *JBNHS* 61: 511 I had drawn attention to the incongruity of indicating a type locality "700 miles off the Nicobars." In *IND. HANDBOOK* (1: 350) this is changed to 700 kilometres, but 434 miles is still too great a distance, and it must be assumed that the original reference (which is not available to me) to 70 Swedish miles is either in error or has been wrongly quoted.

246 *Francolinus pondicerianus pondicerianus* (Gmelin) (Pondicherry, India) Grey Partridge

2: 1 ♂ 1 ♀ South Andamans Wings 145, 141.

This was introduced into the Andamans and the pair collected on 6 March agrees with the nominate race.

345 *Amaurornis phoenicurus insularis* Sharpe (Andamans) White-breasted Waterhen

1 ♂ 1 ♀ South Andamans, 1 ♀ Narcondam Island.

One was seen on South Sentinel Island. Some of the Andaman birds are not jet black below and resemble those from India, but this is possibly a subadult phase.

346 *Gallixrex cinerea cinerea* (Gmelin) (China) Watercock or Kora

1 ♂ 1 ♀ 28 April 1970.

Both birds were put up out of small patches of marshy ground (which also held snipe) along the road 20 to 25 miles from Port Blair. One of them flew about 50 yards across the road and settled in a tangle of vegetation about 30' up on the edge of the forest.

Among the specimens available (excluding a ♂ with an enlarged 61 mm. crest, and including a male and two females from the Andamans) the bill (from feathers) measures appreciably more than the culmen as in *FAUNA* repeated in *IND. HANDBOOK*.

Bill ♂♂ 47-50 av. 47.7 (culmen 37-38)

Bill ♀♀ 37-42 av. 39 (culmen 32-34)

The stomachs held 3 snails [1 *Planaxis* sp. (brackish water), 2 *Neretina* sp. (fresh water)], several grasshoppers (Orthoptera), and the bulbils of an unidentified plant.

- 347a *Gallinula chloropus orientalis* Horsfield (Java) Malay Moorhen
 2 ♀ ♀ 3 and 6 March, 1969. South Andamans.
 Wing 165, 166; tail 62, 63; tarsi 47, 48

A bird obtained earlier was identified as of this race by Dr. Ripley, leading to its addition to the list of birds in Indian limits. That specimen has a large red frontal shield 12 mm. broad as against 9 mm. in a ♂ from Simla, but the present two cannot be separated by size or colour, except that they appear to have heavier bills.

- 349 *Porphyrio porphyrio* subsp. Purple Moorhen
 1 ♀ Sipighat, South Andamans. 7 March, 1969.

We saw several birds among the high *Asplenium* ferns alongside a tidal creek and it appeared to be an addition to the Andaman avifauna. On my way back, I stopped for a short period at the Indian Museum and was surprised to see 3 specimens collected at Trinkut, Nicobars. They are very old specimens obtained in 1886 by a Mr. E. N. May (probably E. H. Man, author of THE ANDAMAN ISLANDERS, 1885) and which do not appear to have been referred to in published literature. The Andaman female has its wings 242 mm. which is slightly less than other females from Indian limits (244-254 av. 250), tarsus 90 (88-98 av. 91.6) and hind toe 84 (89-97 av. 93) but does not show any appreciable difference in any other respect. Mr. P. K. Das (*infra* p. 459) is reporting on the Nicobar birds.

- 374 *Charadrius leschenaultii* Lesson (Pondicherry) Large Sand Plover
 1 ♀ Chauldhari, 1 ♀ Port Blair, South Andamans. Wings 135, 147; bills 23, 25.
- 379 *Charadrius dubius curonicus* Gmelin (Kurland) Little Ringed Plover
 1 ♂ Port Blair, Andamans. Wing 120.
- 384 *Charadrius mongolus atrifrons* Wagler (Bengal) Pamir Lesser Sand Plover
 2: 1 ♀ (wing 124) Chauldhari, 1 ♂ in breeding plumage (wing 127) Port Blair.
- 398 *Tringa glareola* Linnaeus (Sweden) Wood or Spotted Sandpiper
 1 ♀ 28 April 1970. Port Blair, Andamans. Bill 31.
- 401 *Tringa hypoleucos hypoleucos* Linnaeus (Sweden) Common Sandpiper
 Osmaston noted it at Narcondam.

- 402 *Arenaria interpres interpres* (Linnaeus) (Sweden) Turnstone
1 ♂ 1 ♀ South Sentinel Island. Out of flock on 13 March 1969.

Osmaston noted them on Narcondam.

- 406 *Gallinago stenura* (Bonaparte) (Sunda Islands) Pintail Snipe
1 South Andamans. 5 March 1969.

- 418 *Calidris subminutus* (Middendorff) (Stanovoi Mountains and mouth of the Uda) Longtoed Stint

4 ♀ ♀ Port Blair, Andamans. 1 April 1969.

All four fell to one shot into a large flock at a freshwater pool. Several flocks seen during March and up to 21 April.

- 468 *Sterna sumatrana sumatrana* Raffles (Sumatra) Blacknaped Tern

A few were seen on rocks as we approached Barren Island.

- 471 *Sterna anaethetus anaethetus* Scopoli (Panay, Philippines) Brown-winged Tern]

1 ♂ off Narcondam Island, 23 April 1969. Wing 251; tail 139.

More white and grey is visible on the upper parts than in other specimens (see *JBNHS* 67: 111) in the collection.

- 500a *Treron pompadora andamanica* (Richmond) (MacPherson Strait, South Andamans) Greyfronted Green Pigeon

1 ♂ South Andaman.

IND. HANDBOOK 3: 104 appears to have overlooked the statement in my Nicobar paper (*JBNHS* 64: 164) where I have confirmed the identity of this subspecies after comparison of series from both places.

- 508a *Ducula aenea andamanica* Abdulali (Betapur, Middle Andamans) Andaman Green Imperial Pigeon

1 ♂ Narcondam Island. April, 1969.

Wing 239; bill 22; tail 157.

The single specimen can be included with those from the Andaman Islands. Grubh saw them (subsp. *nicobarica*) being shot with airguns at Car Nicobar.

- 509 *Ducula bicolor* (Scopoli) (New Guinea) Pied Imperial Pigeon

3 ♂♂ (1 juv.) 1 ♀ 1o? nestling, South Sentiuel Island, 17 miles off Sothu Andamans.

As recorded by Osmaston some sixty years ago, this bird was still plentiful on this yet uninhabited island, and large numbers were nesting in mid-March, when Grubh and Pimento visited this place. The island

was covered with the tree *Manilkara littoralis* which possibly provides its food. As noted by Butler (1899: 688), their pied plumage makes them difficult to spot in the "shifting lights of the thickly-leaved trees". The call often heard from birds seated overhead was a distinct two-syllabled "cru-croo" often repeated and reminiscent of that of the domestic pigeon. The chuckling "hu-hu-hu" recorded by Butler was not heard.

A few were seen on Barren Island.

The observer's movements in the jungle apparently sent them flying from tree to tree constantly but the flight was remarkably noiseless, even in the silent jungle. Sometimes, they would take off so violently that loud "claps" were heard when their wings met over their backs. They would glide away gracefully when high enough. When turning in flight they produced a curious buzzing noise which "I (RBG) have not heard in any other species". In mid-March, many had nests, about the size of a crow's but thinner, flatter, and cruder, with no lining, and between 10 and 15 feet above the ground. Three nests closely examined contained one chick (c. 150 gm.) each.

One nestling was preserved. The nestling and juvenile are described in Robinson & Chasen's *BIRDS OF THE MALAY PENINSULA* (1935, 3: 53) but as this appears to have been omitted in Indian literature, I may mention that:

(a) the nestling has the white feathers of the upper parts tipped broadly with "sandy apricot-buff" (Robinson & Chasen), these feathers having greyish bases. The underparts have a slight wash of this colour, but not prominently on the tips;

(b) in the juvenile, the buffish tips are more widely separated making the grey more prominent.

525 *Columba palumboides palumboides* Hume (Port Mouat, Andamans)
Andaman Wood Pigeon

1 ♂ South Andamans. Wing 258; tail 153; bill 21.

This specimen must be looked at against the light to differentiate its grey head from the white of the Nicobar birds. The middle toe and claw (44 mm.) is shorter than in *nicobarica*.

527a *Macropygia rufipennis andamanica* Abdulali (Betapur, N. Andamans) Andaman Cuckoo-Dove

1 ♂ Calicut, South Andamans. 13 April 1969.
Wing 194; tail 200.

In addition to confirming the colour difference between Andaman and Nicobar birds (*JBNHS* 63: 421), it would appear that the latter have heavier bills.

536 *Streptopelia tranquebarica humilis* (Temminck) (Bengal & Luzon)
Burmese Red Turtle Dove

1 ♂ South Andamans.

544 *Chalcophaps indica maxima* Hartert (Golapabung, South Andamans) Andaman Emerald Dove

1 ♂ Chirria Tapoo, South Andamans, 1 ♂ Car Nicobar.

Though we did not see any, a single feather was picked up and the bird was heard "ghooming" at Narcondam, where Osmaston (*JBNHS* 16: 621) had obtained a specimen.

544a *Calaenas nicobarica* (Linnaeus) (Nicobar Islands) Nicobar Pigeon

5: 2 ♂♂ 2 ♀♀ 1o? (1 chick in spirit) 2 South Sentinel, 3 Battye Malve.

On South Sentinel Island which is about 5 miles in circumference, Grubb estimated a population of 50-75 birds, mostly seen feeding on the ground among dry leaves in a little clearing. When first approached they would rise and settle in trees hardly 20 yards away, but flew further away if disturbed again. At Battye Malve, about 19 miles north of Car Nicobar, they were abundant and many trees, large and small, held nests with birds sitting on single young. Many immature birds, distinguished by their green and not white tails, flew around. A Nicobarese companion said the egg-laying period was over.

The call was a heavy typical pigeon-like *hu-hu* or *hu-hu-hu* which was only heard at Battye Malve. They were also so tame here that one could shoot many one after another with a .22. A flock often fed on the ground 30 feet away.

A member of the Survey of India said that he had seen both adults and young drinking sea-water collected on coral ledges adjoining the sea. Hume (*STRAY FEATHERS* 2: 96), who visited this island on 19 March 1873, estimated that there were between 2,000 and 10,000 birds and that here they "fed on the small white albuminous seed, which the undergrowth (and one never met with anything like it elsewhere) here produces in such enormous quantities and with which we found the crops of young and old crammed. . . .".

When writing on Nicobar birds I had referred to this island being shelled by the Navy for target practice. I had then drawn the attention of

one of the officers to the damage done to this wonderful pigeon and I understand that this practice has now been suspended.

548 *Psittacula eupatria magnirostris* (Ball) (Andaman Islands) Large Andaman Parakeet

1 ♂ 3 ♀ ♀ Narcondam Island.

Common at Narcondam where it was also noted by Osmaston.

552 *Psittacula alexandri abbotti* (Oberholser) (South Andaman Island) Andaman Redbreasted Parakeet

1 ♂? South Andamans.

Juvenile, with red bill, no red on breast, and brownish, not grey head.

576 *Cuculus micropterus micropterus* Gould (Himalayas*) Indian Cuckoo

1 ♂ Mithakhari, South Andamans. 11 April 1969.

Wing 210; tail 160.

580 *Cuculus saturatus saturatus* Blyth (Nepal) Himalayan Cuckoo

1 ♀ South Andamans. 8 March 1969.

Wing 179; tail 133.

592 *Eudynamys scolopacea dolosa* Ripley (Barren Island, Andamans) Andaman Koel

1 ♂? South Andamans.

Wing and tail in moult, but washed with rufous above.

Osmaston heard and saw a good many on Narcondam in early October and thought they were undoubtedly cold weather visitors. We saw some on Barren Island on 30 April.

603 *Centropus (sinensis) andamanensis* Beavan (Andaman Islands) Andaman Crow-Pheasant

1 ♀ obtained at Sipighat on 6 March had enlarged ovaries. Grubb notes that in addition to its usual hoot, solitary birds were heard to utter an oft-repeated *chur-r-r-ooo*, which is occasionally heard in the mainland form.

607 *Tyto alba deroepstorffii* (Hume) (Aberdeen, South Andamans) Andaman Barn Owl

1 ♂? South Cinque Island, South Andamans.

* The type locality is shown to be restricted to the Simla-Almora Districts in Stuart Baker's FAUNA (4: 144).

One of two birds seen among trees on this well-wooded island was obtained.

This bird, which appears to be very rare in collections, agrees with the original description, and is very different from Indian birds. The wing (258 mm.) and tail (110 mm.) are shorter. The Zoological Survey of India also have a ♂ (No. 18666) with a 241 mm. wing collected before 1890 in the Andamans, and with no other data.

613 *Otus balli* (Hume) (South Andaman Island) Andaman Scops Owl

The bird recorded as of this species (*JBNHS* 61: 534) is *Otus scops modestus* (Walden) as later determined by Dr. Biswas at the British Museum (N.H.).

645 *Ninox scutulata obscura* Hume (Camorta, Nicobars) Brown Hawk-Owl

1 ♂ South Andamans. Wing 222; tail 130.

In the Andaman paper (*JBNHS* 61: 535) I had referred to specimens obtained by Abbott and Kloss at Car Nicobar, Katchal, and Little Nicobar under *obscura*. It is now noticed that though these were listed as *Ninox scutulata*, they are now under *Ninox affinis* and no specimen of *obscura* from the Nicobars is now traceable. It has therefore yet to be determined if the birds from the Andamans are the same as topotypes. Hume specifically stated that two from the Andamans differed from the type from Camorta, the former being termed "older".

672 *Caprimulgus indicus jotaka* Temm. & Schl. (Japan) Migratory Nightjar

1 ♂ lat. 12° 34' 30" N.; long. 93° 38' 30" E. c. 60 miles north-east of Port Blair.
See *JBNHS* 67: 331.

679 *Caprimulgus macrurus andamanicus* Hume (Jolly Boys Island, South Andamans) Andaman Longtailed Nightjar

2 ♀♀ 1 Port Blair, 1 Wrightmyo, South Andamans.
Wings 183, 187; tails 126, 134.

The birds taken on 1 and 9 April both had enlarged ovaries. The first had already laid an egg and had another shelled egg in the oviduct. They were found among dry leaves on the ground in thick forest. Also seen on South Cinque Island.

684 *Collocalia brevirostis innominata* Hume (Type from Port Mouat, S. Andamans) Hume's Swiftlet

Osmaston has listed this as seen in numbers around the summit of the mountain at Narcondam and suggested that it bred along the south coast of the island. No specimen was taken and, in view of the great confusion that has dogged the identity of *innominata*, I wonder if it is worthwhile accepting these records as has been done in IND. HANDBOOK.

687 *Collocalia esculenta affinis* Beavan (Port Blair, South Andamans)
Whitebreasted Swiftlet

1 ♀ Port Blair, South Andamans. 12 April 1969. Wing 97 mm.

The bird was taken from a nest with 1 egg on the wall of the local jail, near the roof.

723 *Alcedo atthis bengalensis* Gmelin (Bengal) Indian Small Blue Kingfisher

3 ♀♀ 5 March, 3 and 11 April 1969. South Andamans. Wing 71(3).

738 *Halcyon smyrnensis saturator* Hume (Andaman Islands) Andaman Whitebreasted Kingfisher

This kingfisher has been recorded only from the Andamans, but I notice that one specimen, "Nicobars (R. S. Wimberley) Tweedale Col." is listed in Sharpe's, 1892, CATALOGUE OF BIRDS IN THE BRITISH MUSEUM, p. 227. As it has not been referred to in any of the published reports, I presume that some uncertainty exists.

739 *Halcyon pileata* (Boddaert) (China) Blackcapped Kingfisher

1 ♀ Narcondam Island. 30 April 1970.

Osmaston saw two and thought it rare.

Struck by a hawk on previous evening, picked up near camp.

743. *Halcyon chloris occipitalis* (Blyth) (Nicobars) Whitecollared Kingfisher

In my Nicobar report (*JBNHS* 64: 175) I referred to differences in plumage, probably linked with sex, overlooking the fact that Richmond (1903, *Proc. U. S. Nat. Mus.* 25: 301) had already expressed a similar opinion. A re-examination of the material available, in the course of cataloguing the Bombay collection, indicates that Car Nicobar birds are different not only from those from the Andamans (*davisoni* Sharpe) but also from those from further south, i.e. Central Nicobars.

Blyth, 1846 (*J. Asiatic Soc. Bengal* 15: 23, note; 51) when describing this from the Nicobars compares it with the Andaman race and says "the back is more infuscated than the other and the crown is likewise

very dark, with some fulvous lateral edges to the frontal feathers". The rufous feathers do not show in the Car Nicobar birds (7: 4 ♂♂ 3 ♀♀) but appear in those from Central Nicobars, which are also darker on the head and back. I am therefore restricting the type locality of *occipitalis* to Camorta, in Central Nicobars. Peter's CHECKLIST (1945, 5: 207-213) however covers 47 subspecies, mostly from different islands, and I cannot separate the Car Nicobar birds without access even to their descriptions!

745 **Merops leschenaulti andamanensis** Marien (Port Blair) Andaman Chestnutheaded Bee-eater

3: 2 ♂♂ 1 ♀ South Andamans.
 ♂♂ Wings 113, 115; tails 80, 83.
 ♀ Wing 111; tail 84.

Common everywhere. The female obtained on 3 April had an unshelled egg in the oviduct.

748 **Merops philippinus philippinus** Linnaeus (Philippine Islands) Bluetailed Bee-eater

1 ♀ South Andamans.

The specimen was obtained on 3 March 1969. Specimens were collected at Trinkut on Central Nicobars on 16 March 1966. I saw it at Port Blair two days later. We have still to determine where it breeds, presumably between the end of March and October when it returns. Osmaston noted them at Narcondam.

762 **Eurystomus orientalis gigas** Stresemann (Rutland Island, South Andamans) Broadbilled Roller

2: 1 ♂ 1 ♀ Wrightmyo, South Andamans.
 Wing ♂ 202, ♀ 198; tail 111, 111.

762a **Eurystomus orientalis** subsp.

1 ♀ Narcondam Island. Wing 193; tail 93.

This bird, with a very small bill, was sent to Dr. Ripley who (*in epis.*) calls it *cyanocollis* < *deignani*, matching the latter in bill size and overall coloration, and with the large wing and tail of *cyanocollis*.

773. **Rhyticeros (undulatus) narcondami** (Hume) Narcondam Hornbill
 4: 293

7: 4 ♂♂ 3 ♀♀ Narcondam Island.

	Wing	Tail	Bill
♂♂	302-316 av. 309 (303-305)	187-199 av. 195 (195-198)	120-129 av. 124 (121-126)
♀♀	283-293 av. 286.5 (285-287)	177-195 av. 188.5 (180-182)	103-111 av. 106

The measurements include those of two old skins in the collection. All the specimens show traces of moult on the belly and the primaries.

On his first visit on 23 April 1969 Grubh obtained 7 specimens all of which had a large amount of fat on the abdomen and rump and were breeding. Presumably arising out of the conversations during this trip, the policemen had been forbidden to shoot any and had confiscated 3 young taken by the Survey of India party; these were eaten up by rats at night. Four types of seeds and fruits including a *Ficus* sp. were obtained in their stomachs, but it has not been possible to identify them. Grubh was also informed that the female was not seated in the nest, but that both parents fed the young, one of the sepoy's having caught both mother and nestling after she had entered the hole to feed it.

On the second trip (29 April 1970) we noted this as the commonest bird on the island, constantly attending to a *Ficus* sp. (*religiosa?*). A ♂ collected had the rump and belly covered with fat. The stomach contained green peepul fruit, which all appeared to be broken in half? [See also observations at page 392 above.]

Osmaston who was on Narcondam from 1-6 October said: "I secured altogether 10 specimens which were carefully skinned and preserved. Five times that number might easily have been shot." Stuart Baker referring to Osmaston says: "Standing under the huge fig-trees, the fruit of which they feed upon, he shot 10 specimens and could have killed ten times that number."

831 *Drycopus javensis hodgei* (Blyth) (Andaman Islands) Andaman Black Woodpecker

1 o? Wrightmyo, South Andamans.

846 *Picoides macei andamanensis* (Blyth) (Port Blair, Andaman Islands) Andaman Spottedbreasted Pied Woodpecker

5: 3 ♂♂ 1 ♀ 1 o?

2 Mithakhari, 2 Wrightmyo, 1 South Andamans.

Wings ♂♂ 97, 99, 99 ♀ 99 o? 101 (♂♀ 94-101)

Tails ♂♂ 59, 60, 60 ♀ 57 o? 61 (♂♀ 55-60)

One bird was busy drumming and ignored the approach of the collector.

917 *Hirundo rustica gutturalis* Scopoli (Philippines) Swallow

Osmaston noted it at Narcondam.

920 *Hirundo tahitica javanica* Sparrman (Java) House Swallow

1 ♀ South Andamans. Wing 108; tail 48.

- 950 *Lanius cristatus lucionensis* Linnaeus (Luzon) Brown Shrike
1 ♀ Port Blair, S. Andamans, 30 March 1969.
- 957 *Oriolus chinensis macrourus* Blyth (Nicobar Islands) Blacknaped Oriole
1 ♀ Battye Malve, 24 March 1969. Wing 151; tail 114.
- 958a *Oriolus xanthornus andamanensis* Abdulali (Wrightmyo, S. Andamans) Blackheaded Oriole
1 ♂ Bambooflats, S. Andamans, 9 March 1969. Wing 131; tail 50.
This is presumably a juvenile in which the yellow is not as deep as in the adult, the black on the chin and head less intense, and with tinges of yellow on the forehead and point of chin.
- 980 *Dicurus paradiseus otiosus* (Richmond) (Andamans) Racket-tailed Drongo
1 ♂ Port Blair, S. Andamans, 1 April 1969.
- 983 *Artamus leucorhynchus humei* Stresemann (Andamans) Ashy Swallow-Shrike
2 ♂♂ Wrightmyo, S. Andamans, 9 April 1969. Both had enlarged testes.
- 986 *Aplonis panayensis tytleri* Hume (Andamans) Glossy Tree Stare
1 ♂ S. Andamans. Wing 117.
Nesting in tree holes during March/April 1969.
- 991 *Sturnus erythropygius erythropygius* (Blyth) (Car Nicobar) White-headed Mynah
1 ♂ Car Nicobar, 23 March 1969.
- 1018 *Gracula religiosa andamanensis* Beavan (Andamans) Hill Myna
1 ♂ Chauldhari, S. Andamans. 1 ♀ Narcondam Island.
Wing ♂ 175, ♀ 169; tail ♂ 82, ♀ 81; bill (from skull) ♂ 27, ♀ 28.
In fresh specimens of both sexes the bill is apple-red except *c.* 10 mm. at tip which is yellow. Within a year the whole bill becomes yellow.
- 1040 *Dendrocitta bayleyi* Tytler (Andamans) Andaman Tree Pie
2: 1 ♀ Wrightmyo, 1 ♂ S. Andamans.
- 1075 *Coracina novaehollandiae andamana* (Neumann) (Andaman Islands) Large Cuckoo-Shrike
1 ♀ S. Andamans, 5 March 1969.
Shell-less egg in oviduct, which was distended.

1076 *Lalage nigra* subsp.

See P. K. Das (loc. cit.)

1095a *Pericrocotus cinnamomeus* subsp. Little Minivet

4: 2 ♂♂ 2 ♀♀

2 Wrightmyo, 2 S. Andamans.

After the manuscript was handed in, Vol. 6 of IND. HANDBOOK has been published where *thai* Deignan is synonymized with *vividus* Baker, which is said to occur in the Andamans. As this conflicts with my findings, I am withholding them until I have had the opportunity of considering the matter afresh.

1109a *Irena puella andamanica* Abdulali (Long Island, Middle Andamans) Fairy Bluebird

2 ♀♀ Chauldhari, S. Andamans.

A re-examination of the material available indicates that though Andaman birds have heavier bills and slightly longer tails (♂♀ 100-110 av. 106 cf. 95-105 av. 101.7 in *sikkimensis* and 95-106 av. 101 in nominate *puella*), they do not represent a very distinct race.

I must also mention that the wing measurements of *sikkimensis* and nominate *puella* overlap to some extent and the former is not as distinctly larger as stated in the original description (*JBNHS* 36: 582)*

8 ♂♂ nominate *puella* 125-133 av. 128 (*123-131)

8 ♂♂ *sikkimensis* 125-136 av. 133 (*133.5-141)

I notice that INDIAN HANDBOOK (6: 63) has synonymized both *sikkimensis* Whistler & Kinnear and *andamanica* with the nominate form.

1113 *Pycnonotus atriceps fuscoflavescens* (Hume) (Port Mouat and Mount Harriet, S. Andamans.) Blackheaded Bulbul

1 Bambooflats, S. Andamans.

1407 *Muscicapa latirostris* Raffles (Sumatra) Brown Flycatcher

2 o? S. Andamans, 4 and 9 April 1969. Wings 71, 71; tails 48, 49.

1467 *Monarcha azurea tytleri* (Beavan) (Port Blair, Andamans) Black-naped Flycatcher

2 ♂♂ (one by plumage) S. Andamans.

1470 *Pachycephala cinerea cinerea* (Blyth) (neighbourhood of Calcutta) Grey Thickhead

3: 1 o? South Sentinel; 1 ♂ Mithakhary, 1 ♂ Port Blair, S. Andamans.

1554 *Acrocephalus orientalis* (Temminck & Schlegel) (Japan) Eastern Great Reed Warbler

4: 3 ♂♂ 1 o? 5th March (2); 8th March (1); 2nd April (1).

No. 23239 does not have the second primary greater than the fifth as required in the FAUNA but conforms with the alternative formula $3 > 2 > 4$ in BIRDS OF U.S.S.R. 6, p. 328.

1604 *Phylloscopus trochiloides trochiloides* (Sundevall) (Calcutta) Dull Green Leaf Warbler

1 o? Chauldhari, S. Andamans. 5 April 1969.

This specimen (BNHS No. 23450) was identified by Dr. Ripley.

1668 *Copsychus malabaricus albiventris* (Blyth) (Andamans) Shama

1 ♂ Calicut, S. Andamans, 13 April 1969.

Except for Zoological Survey Sp. No. 28363 (Wrightmyo, S. Andamans, 31 March 1964), this is the only one seen or obtained in recent years. Its numbers would appear to have declined appreciably, unless we have missed some very restricted ecological niches occupied by the species.

1735 *Zoothera citrina andamanensis* (Walden) (Andamans) Orange-headed Ground Thrush

1 ♂ South Cinque Island, off South Andamans.

This specimen agrees with one collected on Car Nicobar and is different from others from Camorta and Nancowry, Central Nicobars (JBNHS 64: 186). Hume 1876 (*Stray Feathers* 4: 289) doubted the validity of *andamanensis*, but did not indicate where his Nicobar specimens were obtained. It is possible that the Car Nicobar population is similar to that from the Andamans, in which case the type locality of *albogularis* (now "Nicobars") may well be restricted to Camorta-Nancowry, Central Nicobars.

My reference (loc. cit.) to the olive-green wash on the back of the Andaman specimens was unnecessary for this was a sexed female, while the Nicobar birds were males.

1762 *Turdus obscurus* Gmelin (Siberia=Lake Baikal) Dark Thrush

2 ♂♂ Narcondam Island—23 April 1969, 30 April 1970.

It is curious that this bird, presumably a winter visitor and of which there are only three records from the Andamans, should have been obtained on both the short visits to Narcondam.

1874 *Motacilla indica* Gmelin (Malabar) Forest Wagtail

Osmaston noted it at Narcondam.

1884 *Motacilla caspica caspica* (Gmelin) (Caspian Sea) Grey Wagtail

1 ♂ South Andamans 9 March 1969. Wing 178; tail 64.

Osmaston noted it at Narcondam.

1903 *Dicaeum concolor virescens* Hume (Neighbourhood of Port Blair) Plaincoloured Flowerpecker

1 ♀ Sipighat, S. Andamans, 20 March 1969, with enlarged ovaries and a distended oviduct.

1913 *Nectarinia jugularis andamanica* (Hume) (Andaman Group) Yellowbreasted Sunbird

2 ♂♂ 1 Narcondam Island; 1 South Sentinel (badly damaged and destroyed).

The Narcondam bird (obtained in 1969) has a 60 mm. wing which is larger than in two from Middle Andamans, 50, 54. The South Sentinel specimen had a 57 mm. wing.

Osmaston noted it as the commonest bird on Narcondam. I only got a glimpse of it during my short visit.

1936 *Zosterops palpebrosa nicobarica* Blyth (Nicobars) White-eye

1 ♂ Bambooflats, 2 ♀♀ South Sentinel Island, S. Andamans.

The male obtained on 9 March had enlarged gonads.

1939 *Passer domesticus* subsp. House Sparrow

1 ♂ Sipighat, 1 ♀ Chauldhari, S. Andamans.

In my Andaman report (*JBNHS* 61: 569) I had referred to specimens from Port Blair (where the species was introduced in 1895) not quite agreeing with those seen in Bombay and other parts of India. The two specimens obtained do not permit me to comment further but a re-examination enables me to re-confirm that the birds from Shwebo, North Burma, are not the same as those occurring in peninsular India. It would also appear that the large numbers of migratory sparrows with pale-coloured bills, which are ringed at Bharatpur are not *parkini* Whistler as at present accepted, but probably *bactrianus* Zarudny & Kudashev, which are said to migrate to northwestern India (Peter's CHECKLIST OF THE BIRDS OF THE WORLD 6: 12) but has not been included in the FAUNA or SYNOPSIS.